UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,372	11/15/2000	Leo Hatjasalo	1625/00032	6224

7590 01/29/2003

Burton A Amernick
Pollock Vande Sande & Amernick
PO Box 19088
Washington, DC 20036-3425

EXAMINER	
STAICOVICI, STEFAN	
ART UNIT	**PAPER NUMBER**
1732	9

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/700,372	HATJASALO ET AL.	
	Examiner	Art Unit	
	Stefan Staicovici	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-10,13,15,17-19,21 and 22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-10, 13, 15, 17-19 and 21-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Applicants' amendment filed November 8, 2002 (Paper No. 9) has been entered. Claims 1, 3-10, 13, 15 and 17-19 have been amended. Claims 2, 11-12, 14, 16 and 20 have been canceled. New claims 21 and 22 have been added.

Claims 1, 3-10, 13, 15, 17-19 and 21-22 are pending in the instant application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 8 and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 98/25747.

WO 98/25747 teaches the claimed apparatus including, a reservoir of polymeric-based material (16), a pressurizing unit (20) to pressurize said polymeric-based material, a mold (24), a heating unit (26) and an atomizer and electric charger (14) that atomizes and electrically charges particles of polymeric-based material (see pages 8-9 and Figures 1-2). Further, WO 98/25747 teaches that the spraying rate and the traveling rate of the mold are controllable, hence it is submitted that the apparatus of WO 98/25747 includes a control unit to adjust said parameters.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 and 4 and rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/25747 in view of Miller (US Patent No. 2,551,035).

WO 98/25747 teaches the basic claimed process of forming a thin-walled article including, electrostatically spraying charged particles (electrically charged state) of an elastomeric composition (polymer based single component material) into a chamber containing an earthed (zero potential) rigid shaped former (mold), forming a coating on said former, consolidating said coating (finished product) and stripping the resulting molded article from the shaped former (see page 2, lines 14-21).

Regarding claim 1, WO 98/25747 does not teach spraying in an electric field. Miller ('035) teaches the idea of spraying an elastomeric (polymer based) composition in an electrostatic field formed between a conductive base (4) and plate (2) in order to form an elastomeric (polymer based) film that can be stripped from the forming surface (col. 1, lines 46-49). It would have been obvious for one of ordinary skill in the art at the time of the invention to use an electrostatic field as taught by Miller ('035) in the process of WO 98/25747 because, Miller ('035) specifically teaches a variety of advantages that an electric filed provides such as

increased particle orientation, improved polymerization, improved matte appearance (col. 1, lines 35-44) and also because, both references teach similar processes and materials.

In regard to claim 4, WO 98/25747 teaches molding a glove or a condom (three-dimensional).

6. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/25747 in view of Miller (US Patent No. 2,551,035) and in further view of Goodridge (US Patent No. 3,607,998).

WO 98/25747 in view of Miller ('035) teaches the basic claimed process as describe above.

Regarding claim 3, WO 98/25747 in view of Miller ('035) does not teach applying a mold release agent on the mold prior to molding. However, the use of release agents during molding to reduce the surface tension is well known in the art as evidenced by Goodridge ('998) that teaches using a mold release agent (col. 6, lines 64-65) during a molding process. Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold release agent as taught by Goodridge ('998) in the process of WO 98/25747 in view of Miller ('035) because, Goodridge ('998) specifically teaches that a mold agent allows demolding as required by the process of WO 98/25747 in view of Miller ('035) and also because, all references teach similar processes and materials. It should be noted that by definition demolding occurs due to a reduction of surface tension caused by the release agent.

In regard to claim 13, WO 98/25747 teaches molding a glove or a condom (three-dimensional).

7. Claims 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/25747 in view of Miller (US Patent No. 2,551,035) and in further view of Itoh (US Patent No. 3,976,031).

WO 98/25747 in view of Miller ('035) teach the basic claimed process as describe above.

Regarding claims 6 and 18, WO 98/25747 in view of Miller ('035) does not teach a mold having at least two treatment blocks set at different voltage levels. Itoh ('031) teaches an electrostatic coating process including providing a molding surface (2) set at different voltage levels forming three distinct regions (A, B and C) (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at different voltage levels as taught by Itoh ('031) in the process of WO 98/25747 in view of Miller ('035) because, Itoh ('031) specifically teaches that by controlling the voltage regions a much improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process and also because, all references teach similar processes and materials.

8. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/25747 in view of Miller (US Patent No. 2,551,035) and in further view of Goodridge (US Patent No. 3,607,998) and Itoh (US Patent No. 3,976,031).

WO 98/25747 in view of Miller ('035) and in further view of Good ridge ('998) teach the basic claimed process as describe above.

Regarding claim 17, WO 98/25747 in view of Miller ('035) and in further view of Good ridge ('998) do not teach a mold having at least two treatment blocks set at different voltage levels. Itoh ('031) teaches an electrostatic coating process including providing a molding surface (2) set at different voltage levels forming three distinct regions (A, B and C) (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at different voltage levels as taught by Itoh ('031) in the process of WO 98/25747 in view of Miller ('035) and in further view of Good ridge ('998) because, Itoh ('031) specifically teaches that by controlling the voltage regions a much improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process and also because, all references teach similar processes and materials.

In regard to claim 7, WO 98/25747 teaches varying the size of the electrostatic charge, the solids composition (hence the viscosity) and the position and speed of the mold as it travels along the spraying units in order to vary the thickness of the resulting molded article (see pages 5-6). Goodridge ('998) teaches a plurality of spray guns (44) (see Figure 3). Itoh ('031) teaches a molding surface (2) set at different voltages forming three distinct regions (A, B and C) in order to provide control of the thickness of the resulting molded article (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at different voltages as taught by Itoh ('031) in the process of WO 98/25747 in view of Miller ('035) and in further view of Good ridge

('998) because, Itoh ('031) specifically teaches that by controlling the voltage regions an improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process and also because, all references teach similar processes and materials.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/25747 in view of Miller (US Patent No. 2,551,035) and in further view of Panandiker *et al.* (US Patent No. 4,055,550).

WO 98/25747 in view of Miller ('035) teach the basic claimed process as describe above.

Regarding claims 5, WO 98/25747 in view of Miller ('035) do not teach heating and mixing the spraying material prior to its spraying. Panandiker *et al.* ('550) teach a polyurethane based composition (col. 3, line 19) used in an electrostatic spraying process (col. 1, line 18) including, providing a first component (polyol and blocking agent) and a second component (polyisocyanate), heating each component and then mixing said components under heat in order to provide a composition to be used in an electrostatic spraying process (see col. 4, line 20 through col. 5, line 15 and Example 1). Therefore, it would have been obvious for one of ordinary skill in the art to have heated a first component and a second component and then mixed said first and second components to form an electrostatic spraying composition as taught by Panandiker *et al.* ('550) in the process of WO 98/25747 in view of Miller ('035), because Panandiker *et al.* ('550) specifically teach a process of preparing a polyurethane based electrostatic composition which is used in the electrostatic process of WO 98/25747 in view of

Miller ('035). It should be noted that WO 98/25747 teaches polyurethane as a material used in the electrostatic process (see page 4).

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/25747 in view of Itoh (US Patent No. 3,976,031).

WO 98/25747 teaches the basic claimed apparatus as described above.

Regarding claim 10, WO 98/25747 does not teach a mold having at least two treatment blocks set at different voltage levels. Itoh ('031) teaches an electrostatic coating process and apparatus including, providing a molding surface (2) set at different voltage levels forming three distinct regions (A, B and C) (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at different voltages as taught by Itoh ('031) in the apparatus of WO 98/25747 because, Itoh ('031) specifically teaches that by controlling the voltage regions a much improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process and also because, both references teach similar processes and materials.

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/25747 in view of Miller (US Patent No. 2,551,035) and in further view of Goodridge (US Patent No. 3,607,998) and Panandiker *et al.* (US Patent No. 4,055,550).

WO 98/25747 in view of Miller ('035) and in further view of Good ridge ('998) teach the basic claimed process as describe above.

Regarding claim 15, WO 98/25747 in view of Miller ('035) and in further view of Good ridge ('998) do not teach heating and mixing the spraying material prior to its spraying. Panandiker *et al.* ('550) teach a polyurethane based composition (col. 3, line 19) used in an electrostatic spraying process (col. 1, line 18) including, providing a first component (polyol and blocking agent) and a second component (polyisocyanate), heating each component and then mixing said components under heat in order to provide a composition to be used in an electrostatic spraying process (see col. 4, line 20 through col. 5, line 15 and Example 1). Therefore, it would have been obvious for one of ordinary skill in the art to have heated a first component and a second component and then mixed said first and second components to form an electrostatic spraying composition as taught by Panandiker *et al.* ('550) in the process of WO 98/25747 in view of Miller ('035) and in further view of Good ridge ('998), because Panandiker *et al.* ('550) specifically teach a process of preparing a polyurethane based electrostatic composition which is used in the electrostatic process of WO 98/25747 in view of Miller ('035) and in further view of Good ridge ('998). It should be noted that WO 98/25747 teaches polyurethane as a material used in the electrostatic process (see page 4).

12. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/25747 in view of Miller (US Patent No. 2,551,035) and in further view of Panandiker *et al.* (US Patent No. 4,055,550) and Itoh (US Patent No. 3,976,031).

WO 98/25747 in view of Miller ('035) and in further view of Panandiker *et al.* ('550) teach the basic claimed process as describe above.

Regarding claim 19, WO 98/25747 in view of Miller ('035) and in further view of Panandiker *et al.* ('550) do not teach a mold having at least two treatment blocks set at different voltage levels. Itoh ('031) teaches an electrostatic coating process including providing a molding surface (2) set at different voltages forming three distinct regions (A, B and C) (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at different voltages as taught by Itoh ('031) in the process of WO 98/25747 in view of Miller ('035) and in further view of Panandiker *et al.* ('550) because, Itoh ('031) specifically teaches that by controlling the voltage regions a much improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process and also because all references teach an electrostatic spraying process.

13. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/25747 in view of Panandiker *et al.* (US Patent No. 4,055,550).

WO 98/25747 teaches the basic claimed apparatus described above.

Regarding claim 21, WO 98/25747 does not teach heating and mixing the spraying material prior to its spraying. Panandiker *et al.* ('550) teach a polyurethane based composition (col. 3, line 19) used in an electrostatic spraying process (col. 1, line 18) including, providing a first component (polyol and blocking agent) and a second component (polyisocyanate), heating each component and then mixing said components under heat in order to provide a composition to be used in an electrostatic spraying process (see col. 4, line 20 through col. 5, line 15 and Example 1). Further,

it should be noted that WO 98/25747 also teaches a polyurethane-based composition (see page 4). Therefore, it would have been obvious for one of ordinary skill in the art to have heated a first component and a second component and then mixed said first and second components to form an electrostatic spraying composition as taught by Panandiker *et al.* ('550) in the apparatus of WO 98/25747, because Panandiker *et al.* ('550) specifically teach an apparatus and process for preparing a polyurethane based electrostatic composition, said polyurethane-based composition being used in the electrostatic apparatus and process of WO 98/25747.

14. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/25747 in view of Itoh (US Patent No. 3,976,031).

WO 98/25747 teaches the basic claimed apparatus described above.

Regarding claim 22, WO 98/25747 does not teach. a mold having at least two treatment blocks set at different voltage levels. Itoh ('031) teaches an electrostatic coating process including providing a molding surface (2) set at different voltage levels forming three distinct regions (A, B and C) (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at different voltages as taught by Itoh ('031) in the apparatus of WO 98/25747 because, Itoh ('031) specifically teaches that by *controlling the voltage regions* (emphasis added) a much improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process and also because all references teach an electrostatic

spraying process. Since each region has a different voltage level, it is submitted that the voltage is a controlled parameter.

15. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US Patent No. 2,551,035) in view of Goodridge (US Patent No. 3,607,998).

Miller ('035) teaches the basic claimed process of spraying an elastomeric (polymer based) composition in an electrostatic field formed between a conductive base (4) and plate (2) in order to form an elastomeric (polymer based) film that can be stripped from the forming surface (col. 1, lines 46-49).

Regarding claim 1, Miller ('035) does not teach electrically charged particles spraying in an electric field. Goodridge ('998) teaches a spraying process in which the particles are first electrically charged and then sprayed onto a molding surface which is set at a potential to attract said sprayed particles (see col. 2, lines 23). It would have been obvious for one of ordinary skill in the art at the time of the invention to electrostatically spray a composition or to electrostatically charge the particles as taught by Goodridge ('998) in the process of Miller ('035) because, Goodridge ('998) teach that a charged particle is attracted to a mold set at an opposite potential and as such known advantages result such as, increased orientation and a more uniform structure, etc. and also because both processes teach similar processes.

Specifically regarding claim 3, Goodridge ('998) teaches using a mold release agent (col. 6, lines 64-65) during a molding process. Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold release agent as taught by Goodridge ('998) in

the process of Miller ('035) because, Goodridge ('998) specifically teaches that a mold agent allows demolding as required by the process of Miller ('035).

16. Claims 6-7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US Patent No. 2,551,035) in view of Goodridge (US Patent No. 3,607,998) and in further view of Itoh (US Patent No. 3,976,031).

Miller ('035) in view of Good ridge ('998) teach the basic claimed process as describe above.

Regarding claims 6 and 17, Miller ('035) in view of Good ridge ('998) do not teach a mold having at least two treatment blocks set at different voltage levels. Itoh ('031) teaches an electrostatic coating process including providing a molding surface (2) set at different voltages forming three distinct regions (A, B and C) (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at different voltages as taught by Itoh ('031) in the process of Miller ('035) in view of Good ridge ('998) because, Itoh ('031) specifically teaches that by controlling the voltage regions a much improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process and also because, all references teach similar processes.

In regard to claim 7, Goodridge ('998) teaches a plurality of spray guns (44) (see Figure 3). Further, Itoh ('031) teaches a molding surface (2) set at different voltages forming three distinct regions (A, B and C) in order to provide control of the thickness of the resulting molded

article (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at different voltages as taught by Itoh ('031) in the process of Miller ('035) in view of Good ridge ('998) because, Itoh ('031) specifically teaches that by controlling the voltage regions a much improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process.

17. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US Patent No. 2,551,035) in view of Goodridge (US Patent No. 3,607,998) and in further view of Panandiker *et al.* (US Patent No. 4,055,550).

Miller ('035) in view of Good ridge ('998) teach the basic claimed process as describe above.

Regarding claims 5 and 15, Miller ('035) in view of Good ridge ('998) do not teach heating and mixing the spraying material prior to its spraying. Panandiker *et al.* ('550) teach a polyurethane based composition (col. 3, line 19) used in an electrostatic spraying process (col. 1, line 18) including, providing a first component (polyol and blocking agent) and a second component (polyisocyanate), heating each component and then mixing said components under heat in order to provide a composition to be used in an electrostatic spraying process (see col. 4, line 20 through col. 5, line 15 and Example 1). Therefore, it would have been obvious for one of ordinary skill in the art to have heated a first component and a second component and then mixed said first and second components to form an electrostatic spraying composition as taught by

Panandiker *et al.* ('550) in the process of Miller ('035) in view of Good ridge ('998), because Panandiker *et al.* ('550) specifically teach a process of preparing a polyurethane based electrostatic composition, whereas Miller ('035) teach electrostatic spraying of elastic materials. It is submitted that polyurethane may be elastomeric.

18. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US Patent No. 2,551,035) in view of Goodridge (US Patent No. 3,607,998) and in further view of Panandiker *et al.* (US Patent No. 4,055,550) and Itoh (US Patent No. 3,976,031).

Miller ('035) in view of Good ridge ('998) and in further view of Panandiker *et al.* ('550) teach the basic claimed process as describe above.

Regarding claim 19, Miller ('035) in view of Good ridge ('998) and in further view of Panandiker *et al.* ('550) do not teach a mold having at least two treatment blocks set at different voltage levels. Itoh ('031) teaches an electrostatic coating process including providing a molding surface (2) set at different voltages forming three distinct regions (A, B and C) (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at different voltages as taught by Itoh ('031) in the process of Miller ('035) in view of Good ridge ('998) and in further view of Panandiker *et al.* ('550) because, Itoh ('031) specifically teaches that by controlling the voltage regions a much improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process.

19. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gavatin *et al.* ('513) in view of Miller (US Patent No. 2,551,035) and in further view of Goodridge (US Patent No. 3,607,998).

Gavatin *et al.* ('513) teach the basic claimed process for forming a thin walled article, having a wall thickness of 40 microns, including spraying a latex (elastomeric) composition onto a rotating former in a chamber, hence forming a coating, drying and vulcanization of the latex film (consolidation) and stripping of the coating to result in a thin walled article.

Regarding claim 1, Gavatin *et al.* ('513) do not teach spraying in an electric field. Further, Gavatin *et al.* ('513) do not teach spraying an electrically charged particle. Miller ('035) teaches the idea of spraying an elastomeric (latex) composition in an electrostatic field formed between a conductive base (4) and plate (2) in order to form an elastomeric (latex) film. Goodridge ('998) teaches a spraying process in which the particles are first electrically charged and then sprayed onto a molding surface which is set at a potential to attract said sprayed particles (see col. 2, lines 23). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to electrostatically charge the particles as taught by Goodridge ('998) and to use an electrostatic field as taught by Miller ('035) in the process of Gavatin *et al.* ('513) because, Miller ('035) specifically teaches a variety of advantages that an electric field provides such as increased particle orientation, improved polymerization, improved matte appearance (col. 1, lines 35-44), whereas Goodridge ('998) teach that a charged particle is attracted to a mold set at an opposite potential and as such known advantages result such as, increased orientation and a more uniform structure, etc.

Specifically regarding claims 3, Goodridge ('998) teaches using a mold release agent (col. 6, lines 64-65) during a molding process. Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold release agent as taught by Goodridge ('998) in the process of Gavatin *et al.* ('513) because, Goodridge ('998) specifically teaches that a mold agent allows demolding as required by the process of Gavatin *et al.* ('513).

20. Claims 4 and 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gavatin *et al.* (US Patent No. 2,296,513) in view of Miller (US Patent No. 2,551,035) and in further view of Goodridge (US Patent No. 3,607,998) and De Laney *et al.* (US Patent No. 2,393,298).

Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) teach the basic claimed process as described above.

Regarding claims 4 and 13, Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) do not specifically teach a glove or a condom. De Laney *et al.* ('298) teach spraying as an alternative method for making a rubber glove (col. 5, lines 19-22). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to manufacture a glove as taught by Laney *et al.* ('298) using the process of Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) because, De Laney *et al.* ('298) specifically teach spraying as an equivalent alternate process and also due to a variety of unclaimed parameters such as material availability, equipment availability, simplicity, cost considerations, available expertise, etc.

21. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gavatin *et al.* (US Patent No. 2,296,513) in view of Miller (US Patent No. 2,551,035) and in further view of Goodridge (US Patent No. 3,607,998) and Itoh (US Patent No. 3,976,031).

Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) teach the basic claimed process as describe above.

Regarding claim 6, Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) do not teach a mold having at least two treatment blocks set at different voltage levels. Itoh ('031) teaches an electrostatic coating process including providing a molding surface (2) set at different voltages forming three distinct regions (A, B and C) (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at different voltages as taught by Itoh ('031) in the process of Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) because, Itoh ('031) specifically teaches that by controlling the voltage regions a much improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process.

In regard to claims 7, Goodridge ('998) teaches a plurality of spray guns (44) (see Figure 3). Further, Itoh ('031) teaches a molding surface (2) set at different voltages forming three distinct regions (A, B and C) in order to provide control of the thickness of the resulting molded article (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at

different voltages as taught by Itoh ('031) in the process of Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) because, Itoh ('031) specifically teaches that by controlling the voltage regions a much improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process.

22. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gavatin *et al.* (US Patent No. 2,296,513) in view of Miller (US Patent No. 2,551,035) and in further view of Goodridge (US Patent No. 3,607,998) and Panandiker *et al.* (US Patent No. 4,055,550).

Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) teach the basic claimed process as describe above.

Regarding claims 5 and 15, Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) do not teach heating and mixing the spraying material prior to its spraying. Panandiker *et al.* ('550) teach a polyurethane based composition (col. 3, line 19) used in an electrostatic spraying process (col. 1, line 18) including, providing a first component (polyol and blocking agent) and a second component (polyisocyanate), heating each component and then mixing said components under heat in order to provide a composition to be used in an electrostatic spraying process (see col. 4, line 20 through col. 5, line 15 and Example 1). Therefore, it would have been obvious for one of ordinary skill in the art to have heated a first component and a second component and then mixed said first and second components to form an electrostatic spraying composition as taught by Panandiker *et al.* ('550) in the process of Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998), because

Panandiker *et al.* ('550) specifically teach a process of preparing a polyurethane based electrostatic composition, whereas both Gavatin *et al.* ('513) and Miller ('035) teach electrostatic spraying of elastic materials. It is submitted that polyurethane may be elastomeric.

23. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gavatin *et al.* (US Patent No. 2,296,513) in view of Miller (US Patent No. 2,551,035) and in further view of Goodridge (US Patent No. 3,607,998), Panandiker *et al.* (US Patent No. 4,055,550) and Itoh (US Patent No. 3,976,031).

Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) and Panandiker *et al.* ('550) teach the basic claimed process as describe above.

Regarding claim 19, Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) and Panandiker *et al.* ('550) do not teach a mold having at least two treatment blocks set at different voltage levels. Itoh ('031) teaches an electrostatic coating process including providing a molding surface (2) set at different voltages forming three distinct regions (A, B and C) (see Figure 4b and col. 7, lines 11-32 and 56-60). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a mold having separate regions (blocks) set at different voltages as taught by Itoh ('031) in the process of Gavatin *et al.* ('513) in view of Miller ('035) and in further view of Goodridge ('998) and Panandiker *et al.* ('550) because, Itoh ('031) specifically teaches that by controlling the voltage regions a much improved control of the thickness results and also, the thickness can be varied from area to area on the same article (see Figure 4b), hence providing for improved versatility and process control of the electrostatic coating process.

Response to Arguments

24. Applicants' remarks filed November 8, 2002 (Paper No. 9) have been considered.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that there is no suggestion to combine the teachings of WO 98/25747 and Miller (US Patent No. 2,551,035), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, WO 98/25747 teaches a process for forming a thin-walled article including, electrostatically spraying charged particles

(electrically charged state) of an elastomeric composition (polymer based single component material) into a chamber containing an earthed (zero potential) rigid shaped former (mold), forming a coating on said former, consolidating said coating (finished product) and stripping the resulting molded article from the shaped former (see page 2, lines 14-21). Miller ('035) teaches the idea of spraying an elastomeric (polymer based) composition in an electrostatic field formed between a conductive base (4) and plate (2) in order to form an elastomeric (polymer based) film that can be stripped from the forming surface (col. 1, lines 46-49). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to use an electrostatic field as taught by Miller ('035) in the process of WO 98/25747 because, Miller ('035) specifically teaches a variety of advantages that an electric filed provides such as increased particle orientation, improved polymerization, improved matte appearance (col. 1, lines 35-44) and also because, both references teach similar processes and materials.

Further, it should be noted that although WO 98/25747 does not specifically teach spraying in an electric field, an electric field does exist between the charged particle and the earthed former in order for the charged particle to be attracted to said earthed former. Hence, it is submitted that WO 98/25747 suggests the existence of an electric field, whereas Miller ('035) specifically teaches spraying an elastomeric (polymer based) composition in an electrostatic field. Further, Miller ('035) specifically teaches a variety of advantages that an electric filed provides such as increased particle orientation, improved polymerization, improved matte appearance (col. 1, lines 35-44). Furthermore, it should be noted that under MPEP § 2144, the "rationale to modify or combine the prior art *does not have to be* expressly stated in the prior art;

the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law." In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

It should be noted that Applicants have not responded in any manner to the rejections stated under paragraphs 13-21 of the previous Office Action mailed May 9, 2002 (Paper No. 6).

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (703) 305-

0396. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM and alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard D. Crispino, can be reached at (703) 308-3853. The fax phone number for this Group is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Stefan Staicovici, PhD

1/27/03

Primary Examiner

AU 1732

January 27, 2003